

Graphical Illustration - Not To Scale
 Member Cut Length - 22'- 4"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length Top:	0'	Bottom:	18'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	12'- 6 3/4"	48999.22 lb ft	84416.79 lb ft	Passed - 58%	1.25	D + 0.75(L + Lr)
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	18'- 10"	7244.56 lb	17955.00 lb	Passed - 40%	1.00	D + L
Live Load Deflection	11'- 4 5/16"	0'- 5/16"	N/A (L/360)	Passed - L/669	-	0.75(L + Lr)
Total Load Deflection	11'- 5 1/16"	0'- 9/16"	N/A (L/240)	Passed - L/385	-	D + 0.75(L + Lr)
Max. Reaction			Supported Mt Supporting Mt			
	0'- 1 1/2"	50.90 lb	38281.25 lb 32156.25 lb	Passed - 0%	1.25	D + 0.75(L + Lr)
	0'- 1 1/2"	-273.58 lb	27562.50 lb -	Passed - 1%	0.90	D
	2'- 2 1/2"	8689.58 lb	27562.50 lb 32156.25 lb	Passed - 32%	1.00	D + L
	20'- 5 1/2"	9331.37 lb	27562.50 lb 32156.25 lb	Passed - 34%	1.00	D + L
	22'- 2 1/2"	-345.71 lb	27562.50 lb -	Passed - 1%	0.90	D

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	22'- 4"	Self Weight	25 lb/ft	-	-	-
Uniform	-0'	8'- 4 3/4"	User Load	150 lb/ft	-	200 lb/ft	-
Uniform	8'- 11"	22'- 4"	User Load	60 lb/ft	-	80 lb/ft	-
Uniform	14'- 5/8"	22'- 4"	Rim1(i4060)	65 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J1(i4048)	153.00 lb	505.00 lb	-	-
Point	2'- 8"	2'- 8"	J1(i4073)	153.00 lb	505.00 lb	-	-
Point	4'	4'	J1(i4075)	153.00 lb	505.00 lb	-	-
Point	5'- 4"	5'- 4"	J1(i4074)	153.00 lb	505.00 lb	-	-
Point	6'- 8"	6'- 8"	J1(i4072)	153.00 lb	504.00 lb	-	-
Point	7'- 11 15/16"	7'- 11 15/16"	J1(i4062)	152.00 lb	504.00 lb	-	-
Point	8'- 7 3/4"	8'- 7 3/4"	User Load	1091.00 lb	-	2181.00 lb	-
Point	9'- 3 15/16"	9'- 3 15/16"	J1(i4079)	153.00 lb	504.00 lb	-	-
Point	10'- 7 15/16"	10'- 7 15/16"	J1(i4084)	153.00 lb	505.00 lb	-	-
Point	11'- 11 15/16"	11'- 11 15/16"	J1(i4083)	153.00 lb	505.00 lb	-	-
Point	13'- 3 15/16"	13'- 3 15/16"	J1(i4082)	105.00 lb	348.00 lb	-	-
Point	13'- 10"	13'- 10"	BM4-3(i4056)	2456.00 lb	252.00 lb	2925.00 lb	-
Point	14'- 7 15/16"	14'- 7 15/16"	J1(i4080)	124.00 lb	409.00 lb	-	-
Point	15'- 11 15/16"	15'- 11 15/16"	J1(i4087)	274.00 lb	589.00 lb	-	-
Point	17'- 3 15/16"	17'- 3 15/16"	J1(i4085)	361.00 lb	649.00 lb	-	-
Point	18'- 7 15/16"	18'- 7 15/16"	J1(i4081)	153.00 lb	505.00 lb	-	-
Point	19'- 11 15/16"	19'- 11 15/16"	J1(i4086)	163.00 lb	505.00 lb	-	-
Point	21'- 3 15/16"	21'- 3 15/16"	J1(i4088)	218.00 lb	633.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	2'- 4"	-	4523.00 lb	4309.00 lb	4484.00 lb	-
+++	0'- 1 1/2"	0'- 1 1/2"	E3(i3)	-	204.00 lb	228.00 lb	-
+++	2'- 2 1/2"	2'- 2 1/2"	E8(i7)	4523.00 lb	4105.00 lb	4256.00 lb	-

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

- This report is based on modeled conditions input by the user. Actual field conditions may differ from those shown. These results should be reviewed by a qualified design professional.



Job: Lot 7 Raven Ridge

Member Type: Beam | Level: 1st Floor
MiTek SAPPHIRE™ Supply Version 8.2.2.241.Update5
Designed by Single Member Design Engine

Label: BM2-3-i4049

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Date: 03/12/2019 14:58:06

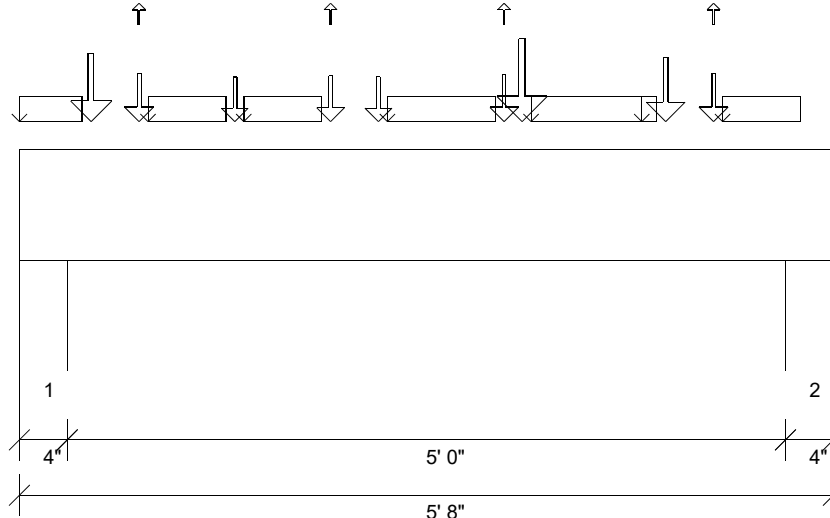
Member: 3 - onCENTER LVL 2.0E 1 3/4" x 18"

Status: Design Passed

2	20'- 4"	22'- 4"	E9(i8)	4950.00 lb	4689.00 lb	3719.00 lb	-
==>	20'- 5 1/2"	20'- 5 1/2"	E9(i8)	4950.00 lb	4381.00 lb	3637.00 lb	-
==>	22'- 2 1/2"	22'- 2 1/2"	E9(i8)	-	308.00 lb	82.00 lb	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 5'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 3 1/16"	Bottom:	5'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	3'- 4 1/2"	3685.51 lb ft	13320.27 lb ft	Passed - 28%	1.00	D + L	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	4'- 6 3/4"	2167.52 lb	6151.25 lb	Passed - 35%	1.00	D + L	
Live Load Deflection	2'- 10 3/8"	0'	N/A (L/360)	Passed - L/999	-	L	
Total Load Deflection	2'- 10 1/2"	0'- 1/16"	N/A (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0'- 3"	2960.38 lb	Supported Mt: 11484.44 lb	Supporting Mt: 12250.07 lb	Passed - 26%	1.00	D + L
	5'- 5"	2694.06 lb	11484.41 lb	12250.04 lb	Passed - 23%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

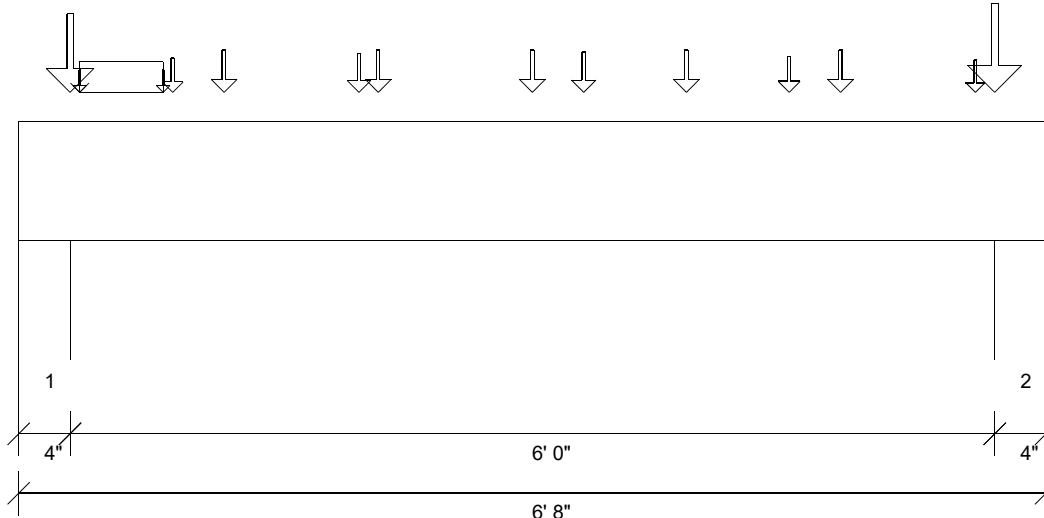
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	5'- 8"	Self Weight	8 lb/ft	-	-	-
Uniform	0'	0'- 5 1/4"	BK1(i4205)	65 lb/ft	-	-	-
Uniform	0'- 10 3/4"	1'- 5 1/4"	BK1(i4267)	65 lb/ft	-	-	-
Uniform	1'- 6 3/4"	2'- 1 1/4"	BK1(i4263)	65 lb/ft	-	-	-
Uniform	2'- 6 3/4"	3'- 3 3/4"	BK1(i4203)	65 lb/ft	-	-	-
Uniform	3'- 6 3/4"	4'- 5 1/4"	BK1(i4135)	65 lb/ft	-	-	-
Uniform	4'- 10 3/4"	5'- 5 1/4"	BK1(i4231)	65 lb/ft	-	-	-
Point	0'- 6"	0'- 6"	J3(i4132)	315.00 lb	513.00 lb	-	-
Point	0'- 10"	0'- 10"	J4(i4094)	98.00 lb	384.00/-14.00 lb	-	-
Point	1'- 6"	1'- 6"	J3(i4183)	89.00 lb	322.00 lb	-	-
Point	2'- 2"	2'- 2"	J4(i4111)	90.00 lb	350.00/-13.00 lb	-	-
Point	2'- 6"	2'- 6"	J3(i4134)	96.00 lb	322.00 lb	-	-
Point	3'- 4 1/2"	3'- 4 1/2"	J4(i4096)	87.00 lb	367.00/-13.00 lb	-	-
Point	3'- 6"	3'- 6"	J3(i4235)	365.00 lb	726.00 lb	-	-
Point	4'- 6"	4'- 6"	J3(i4176)	311.00 lb	450.00 lb	-	-
Point	4'- 10"	4'- 10"	J4(i4099)	98.00 lb	384.00/-14.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E46(i103)	950.00 lb	1998.00/-27.00 lb	-	-
2	5'- 4"	5'- 8"	E44(i101)	887.00 lb	1820.00/-27.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
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- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 6'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 3 1/16"	Bottom:	6'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination		
Critical Moment (Pos)	3'- 4"	3640.19 lb ft	13320.27 lb ft	Passed - 27%	1.00	D + L		
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft					
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft					
Critical Shear	1'- 1 1/4"	1907.79 lb	6151.25 lb	Passed - 31%	1.00	D + L		
Live Load Deflection	3'- 4"	0'- 1/16"	N/A (L/360)	Passed - L/999	-	L		
Total Load Deflection	3'- 4"	0'- 1/16"	N/A (L/240)	Passed - L/999	-	D + L		
Max. Reaction	0'- 3"	3301.93 lb	Supported Mt	11484.41 lb	12250.04 lb	Passed - 29%	1.00	D + L
	6'- 5"	3554.12 lb	Supporting Mt	11484.44 lb	12250.08 lb	Passed - 31%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

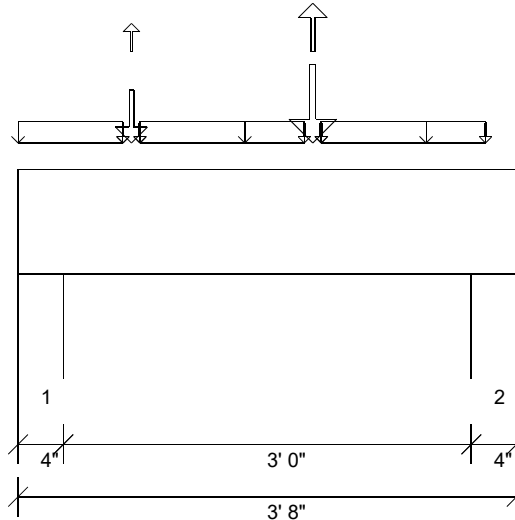
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	6'- 8"	Self Weight	8 lb/ft	-	-	-
Uniform	0'- 4 3/4"	0'- 11 1/4"	Bk1(i4141)	22 lb/ft	88 lb/ft	-	-
Point	0'- 4"	0'- 4"	J3(i4149)	445.00 lb	835.00 lb	-	-
Point	0'- 4 3/4"	0'- 4 3/4"	Bk1(i4141)	1.00 lb	6.00 lb	-	-
Point	0'- 11 1/4"	0'- 11 1/4"	Bk1(i4141)	1.00 lb	6.00 lb	-	-
Point	1'	1'	J5(i4116)	67.00 lb	207.00 lb	-	-
Point	1'- 4"	1'- 4"	J3(i4115)	141.00 lb	322.00 lb	-	-
Point	2'- 2 1/2"	2'- 2 1/2"	J5(i4102)	135.00 lb	246.00 lb	-	-
Point	2'- 4"	2'- 4"	J3(i4171)	141.00 lb	322.00 lb	-	-
Point	3'- 4"	3'- 4"	J3(i4179)	141.00 lb	322.00 lb	-	-
Point	3'- 8"	3'- 8"	J5(i4175)	154.00 lb	258.00 lb	-	-
Point	4'- 4"	4'- 4"	J3(i4129)	141.00 lb	322.00 lb	-	-
Point	5'	5'	J5(i4103)	78.00 lb	235.00 lb	-	-
Point	5'- 4"	5'- 4"	J3(i4126)	141.00 lb	322.00 lb	-	-
Point	6'- 2 1/2"	6'- 2 1/2"	J5(i4212)	55.00 lb	175.00 lb	-	-
Point	6'- 4"	6'- 4"	J3(i4248)	591.00 lb	930.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E48(i107)	1074.00 lb	2210.00/-1.00 lb	-	-
2	6'- 4"	6'- 8"	E46(i103)	1227.00 lb	2346.00/-1.00 lb	-	-

Errors, Warnings & Notes:

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Graphical Illustration - Not To Scale
 Member Cut Length - 3'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 4 5/8"	Bottom:	3'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	2'- 2"	977.91 lb ft	3429.65 lb ft	Passed - 29%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	2'- 6 3/4"	773.90 lb	2497.50 lb	Passed - 31%	1.00	D + L
Live Load Deflection	1'- 10 3/8"	0'	N/A (L/360)	Passed - L/999	-	0.75(L + Lr)
Total Load Deflection	1'- 10 3/8"	0'	N/A (L/240)	Passed - L/999	-	D + 0.75(L + Lr)
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 3"	1165.03 lb	5578.16 lb 10500.08 lb	Passed - 21%	1.25	D + 0.75(L + Lr)
	0'- 3"	-2.78 lb	5578.16 lb -	Passed - 0%	1.25	D + Lr
	3'- 5"	969.75 lb	5578.16 lb 10500.08 lb	Passed - 17%	1.25	D + 0.75(L + Lr)
	3'- 5"	-93.76 lb	5578.16 lb -	Passed - 2%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

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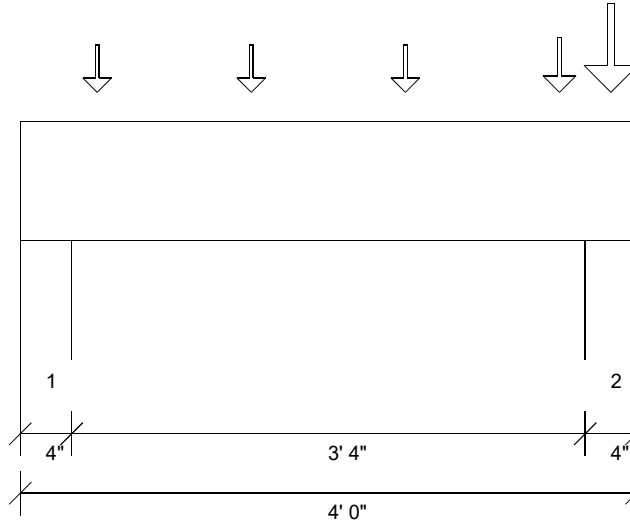
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	3'- 8"	Self Weight	6 lb/ft	-	-	-
Uniform	0'	0'- 9 1/4"	BK1(i4131)	7 lb/ft	27 lb/ft	-	-
Uniform	0'- 10 3/4"	2'- 1 1/4"	Bk1(i4119)	7 lb/ft	27 lb/ft	-	-
Uniform	2'- 2 3/4"	3'- 5 1/4"	BK1(i4254)	7 lb/ft	27 lb/ft	-	-
Point	0'- 9 1/4"	0'- 9 1/4"	BK1(i4131)	-	2.00 lb	-	-
Point	0'- 10"	0'- 10"	J3(i4169)	241.00 lb	486.00/-52.00 lb	168.00/-170.00 lb	-
Point	0'- 10 3/4"	0'- 10 3/4"	BK1(i4119)	-	2.00 lb	-	-
Point	2'- 1 1/4"	2'- 1 1/4"	BK1(i4119)	-	2.00 lb	-	-
Point	2'- 2"	2'- 2"	J3(i4136)	373.00 lb	636.00/-181.00 lb	582.00/-586.00 lb	-
Point	2'- 2 3/4"	2'- 2 3/4"	BK1(i4254)	-	2.00 lb	-	-
Point	3'- 5 1/4"	3'- 5 1/4"	BK1(i4254)	-	2.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E13(i57)	355.00 lb	674.00/-109.00 lb	352.00/-355.00 lb	-
2	3'- 4"	3'- 8"	E39(i96)	305.00 lb	543.00/-124.00 lb	398.00/-401.00 lb	-

Errors, Warnings & Notes:

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- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
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Graphical Illustration - Not To Scale
 Member Cut Length - 4"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	0'- 10 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	1'- 6"	673.49 lb ft	3429.65 lb ft	Passed - 20%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1 1/4"	545.11 lb	2497.50 lb	Passed - 22%	1.00	D + L
Live Load Deflection	1'- 11 3/4"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	1'- 11 13/16"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 3"	912.74 lb	<u>Supported Mt</u> 5578.12 lb	Passed - 16%	1.00	D + L
	3'- 9"	2290.36 lb	<u>Supporting Mt</u> 10500.00 lb	Passed - 41%	1.00	D + L

Design Notes:

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Loading:

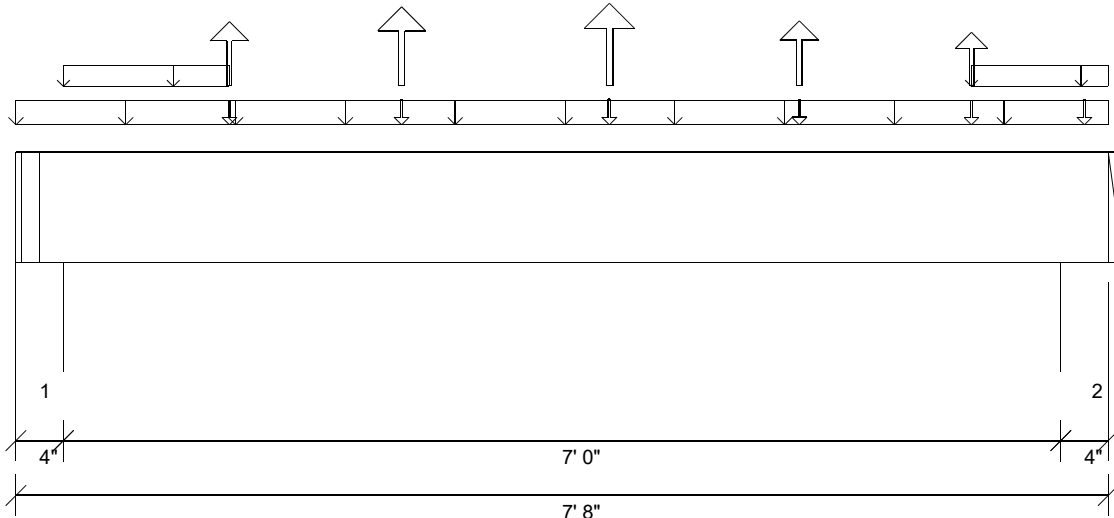
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	4'	Self Weight	6 lb/ft	-	-	-
Point	0'- 6"	0'- 6"	J4(i4184)	133.00 lb	327.00 lb	-	-
Point	1'- 6"	1'- 6"	J4(i4090)	133.00 lb	327.00 lb	-	-
Point	2'- 6"	2'- 6"	J4(i4193)	133.00 lb	327.00 lb	-	-
Point	3'- 6"	3'- 6"	J4(i4236)	265.00 lb	327.00 lb	-	-
Point	3'- 10"	3'- 10"	E97(i547)	446.00 lb	761.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E44(i101)	278.00 lb	654.00 lb	-	-
2	3'- 8"	4'	E4(i1)	856.00 lb	1415.00 lb	-	-

Errors, Warnings & Notes:

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Graphical Illustration - Not To Scale
 Member Cut Length - 7'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 4"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	4'- 2"	2889.51 lb ft	3429.65 lb ft	Passed - 84%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 6"	1346.39 lb	2497.50 lb	Passed - 54%	1.00	D + L
Live Load Deflection	3'- 10 1/16"	0'- 1/16"	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	3'- 9 15/16"	0'- 1/8"	N/A (L/240)	Passed - L/875	-	D + L
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 3"	-1245.99 lb	5578.08 lb	-	1.00	D + L
	7'- 5"	-1261.06 lb	5578.13 lb	-	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

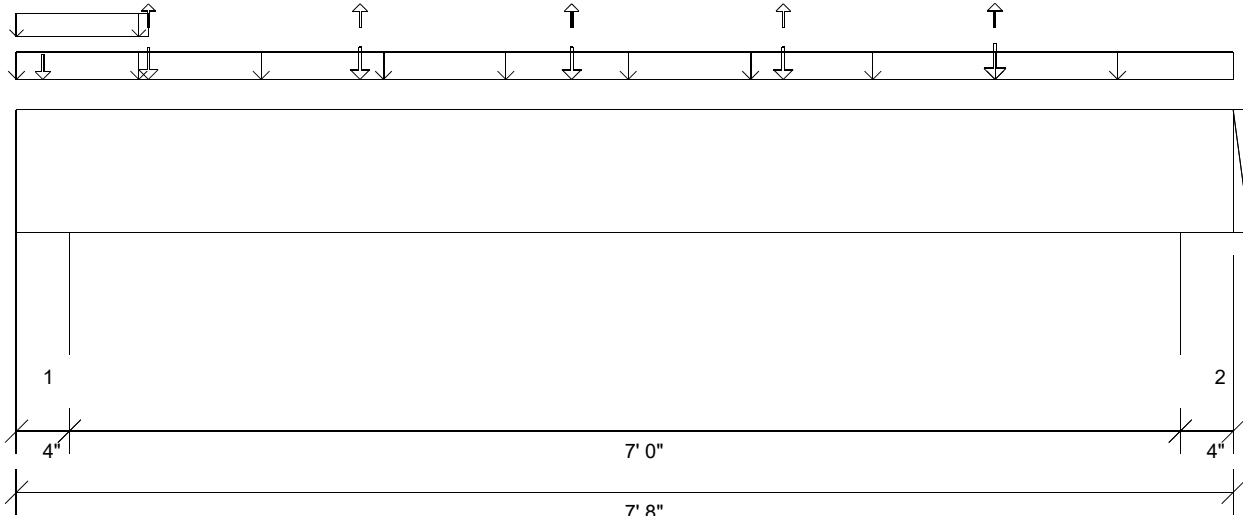
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	7'- 8"	Self Weight	6 lb/ft	-	-	-
Uniform	0'	7'- 8"	User Load	60 lb/ft	-	-	-
Uniform	0'- 4"	1'- 6"	FC1 Floor Material	1 lb/ft	5 lb/ft	-	-
Uniform	6'- 8 1/2"	7'- 8"	FC1 Floor Material	1 lb/ft	5 lb/ft	-	-
Point	1'- 6"	1'- 6"	J5(i4116)	-165.00 lb	55.00/-390.00 lb	-	-
Point	2'- 8 1/2"	2'- 8 1/2"	J5(i4102)	-332.00 lb	61.00/-413.00 lb	-	-
Point	4'- 2"	4'- 2"	J5(i4175)	-358.00 lb	64.00/-433.00 lb	-	-
Point	5'- 6"	5'- 6"	J5(i4103)	-172.00 lb	58.00/-394.00 lb	-	-
Point	6'- 8 1/2"	6'- 8 1/2"	J5(i4212)	-125.00 lb	42.00/-294.00 lb	-	-
Point	7'- 6"	7'- 6"	E68(i136)	60.00 lb	-	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E12(i54)	-321.00 lb	140.00/-925.00 lb	-	-
2	7'- 4"	7'- 8"	E33(i87)	-262.00 lb	151.00/-999.00 lb	-	-

Errors, Warnings & Notes:

- * CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 7'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 2 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	3'- 7 1/2"	779.05 lb ft	3429.65 lb ft	Passed - 23%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	6'- 6 3/4"	363.04 lb	2497.50 lb	Passed - 15%	1.00	D + L
Live Load Deflection	3'- 10 1/4"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	3'- 10 1/16"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 3"	470.80 lb	<u>Supported Mt</u> 5577.56 lb	Passed - 8%	1.00	D + L
	7'- 5"	435.95 lb	<u>Supporting Mt</u> 10498.83 lb	Passed - 8%	1.00	D + L
			5578.13 lb	10500.00 lb		

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

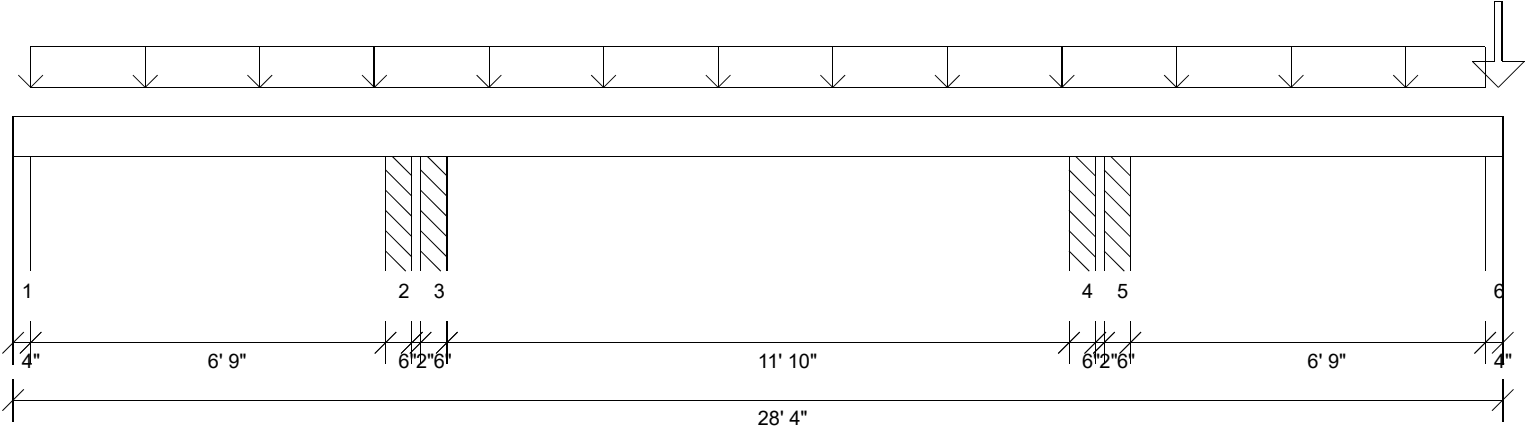
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	7'- 8"	Self Weight	6 lb/ft	-	-	-
Uniform	0'	7'- 8"	User Load	60 lb/ft	-	-	-
Uniform	0'	0'- 10"	FC1 Floor Material	1 lb/ft	5 lb/ft	-	-
Point	0'- 2"	0'- 2"	E93(i157)	16.00 lb	-	-	-
Point	0'- 10"	0'- 10"	J7(i4147)	21.00 lb	47.00/-8.00 lb	-	-
Point	2'- 2"	2'- 2"	J7(i4166)	12.00 lb	59.00/-9.00 lb	-	-
Point	3'- 6"	3'- 6"	J7(i4170)	12.00 lb	59.00/-9.00 lb	-	-
Point	4'- 10"	4'- 10"	J7(i4221)	12.00 lb	59.00/-9.00 lb	-	-
Point	6'- 2"	6'- 2"	J7(i4241)	17.00 lb	81.00/-13.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E33(i87)	313.00 lb	158.00/-24.00 lb	-	-
2	7'- 4"	7'- 8"	E6(i753)	285.00 lb	151.00/-24.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 28'- 4"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 27'- 8"	Bottom:	27'- 8"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	20'- 4"	3286.53 lb ft	10813.27 lb ft	Passed - 30%	1.25	D + Lr
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	19'- 11 3/4"	1653.99 lb	7689.06 lb	Passed - 22%	1.25	D + Lr
Live Load Deflection	20'- 9"	0'	N/A (L/360)	Passed - L/414	-	Lr
Total Load Deflection	20'- 9"	0'	N/A (L/240)	Passed - L/394	-	D + Lr
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 3"	665.70 lb	11484.28 lb 12249.89 lb	Passed - 6%	1.25	D + Lr
	7'- 4"	-917.17 lb	16734.31 lb -	Passed - 6%	0.90	D
	8'	2677.31 lb	15750.00 lb 15225.00 lb	Passed - 18%	0.90	D
	20'- 4"	2695.61 lb	15750.00 lb 15225.00 lb	Passed - 18%	0.90	D
	21'	-940.59 lb	15750.00 lb -	Passed - 6%	0.90	D
	28'- 1"	1108.57 lb	11484.40 lb 12250.02 lb	Passed - 10%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

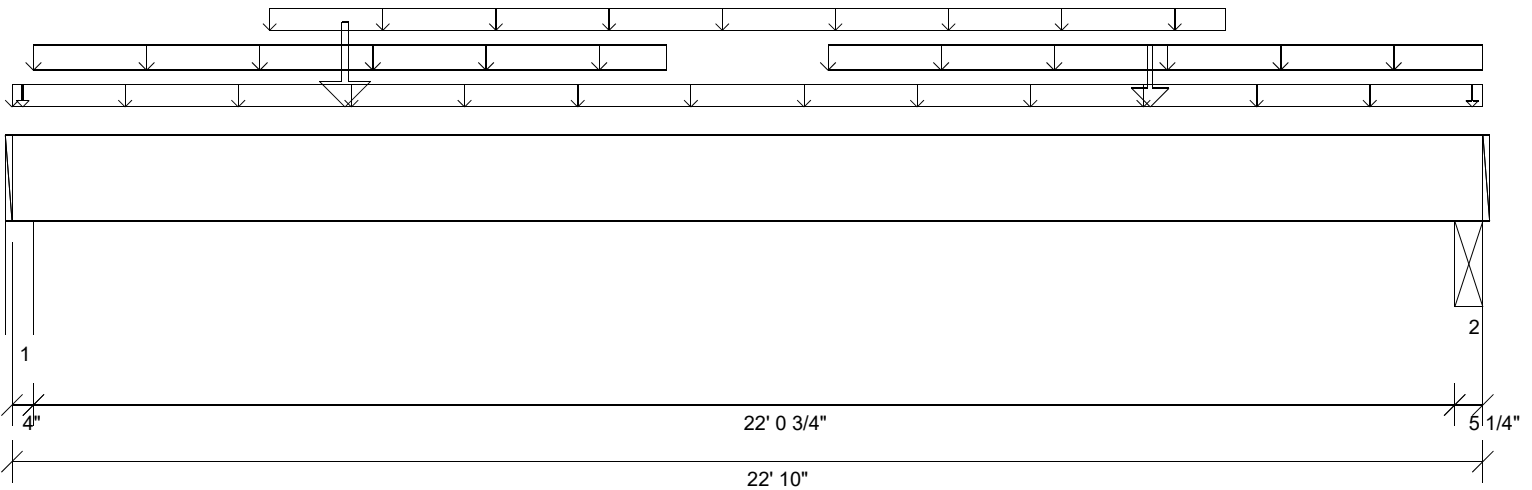
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	28'- 4"	Self Weight	8 lb/ft	-	-	-
Uniform	0'- 4"	28'	User Load	150 lb/ft	-	120 lb/ft	-
Point	28'- 3"	28'- 3"	J1(i4073)	152.00 lb	500.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E12(i54)	382.00 lb	-	390.00/-122.00 lb	-
2	7'- 1"	7'- 7"	PBO1(i532)	-	-	530.00 lb	-
3	7'- 9"	8'- 3"	PBO3(i534)	1813.00 lb	-	1373.00 lb	-
4	20'- 1"	20'- 7"	PBO4(i535)	1813.00 lb	-	1373.00 lb	-
5	20'- 9"	21'- 3"	PBO2(i533)	-	-	530.00 lb	-
6	28'	28'- 4"	E7(i752)	534.00 lb	500.00 lb	390.00/-122.00 lb	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 22'- 10"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	22'- 3/4"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	5'- 2 1/16"	31174.67 lb ft	68289.58 lb ft	Passed - 46%	1.25	D + Lr
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 8"	6435.13 lb	19950.00 lb	Passed - 32%	1.25	D + Lr
Live Load Deflection	11'- 1/4"	0'- 7/16"	N/A (L/360)	Passed - L/595	-	Lr
Total Load Deflection	11'- 15/16"	0'- 13/16"	N/A (L/240)	Passed - L/335	-	D + Lr
Max. Reaction	0'- 3"	6597.35 lb	<u>Supported Mt</u> 17226.50 lb	Passed - 38%	1.25	D + Lr
	22'- 5 3/4"	5381.33 lb	<u>Supporting Mt</u> 20671.96 lb	Passed - 26%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

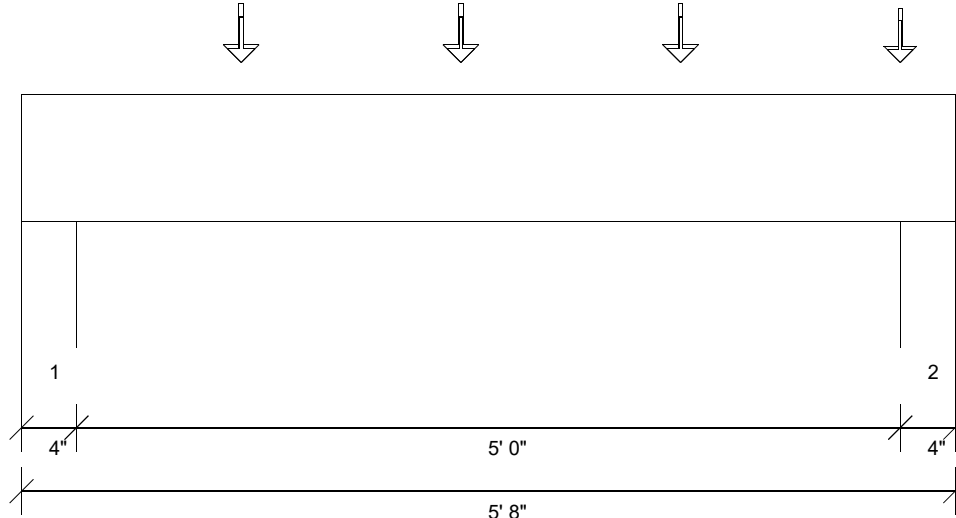
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	22'- 10"	Self Weight	22 lb/ft	-	-	-
Uniform	-0'	22'- 10"	FC2 Floor Material	7 lb/ft	13 lb/ft	-	-
Uniform	0'- 4"	10'- 2"	E58(i122)	65 lb/ft	-	-	-
Uniform	4'	18'- 10"	FC2 Floor Material	-	13 lb/ft	-	-
Uniform	12'- 8"	22'- 10"	E59(i124)	65 lb/ft	-	-	-
Point	0'- 2"	0'- 2"	E91(i162)	28.00 lb	-	-	-
Point	5'- 2 1/16"	5'- 2 1/16"	E58(i122)	2043.00 lb	-	4086.00 lb	-
Point	17'- 8 1/16"	17'- 8 1/16"	E59(i124)	1289.00 lb	-	2578.00 lb	-
Point	22'- 8"	22'- 8"	E60(i125)	3.00 lb	-	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E5(i2)	2859.00 lb	250.00 lb	3739.00 lb	-
2	22'- 4 3/4"	22'- 10"	BM2-3(i4049)	2456.00 lb	252.00 lb	2925.00 lb	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 5'- 8"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 3/8"	Bottom:	5'		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	2'- 8"	1040.97 lb ft	3429.65 lb ft	Passed - 30%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1 1/4"	653.11 lb	2497.50 lb	Passed - 26%	1.00	D + L
Live Load Deflection	2'- 9 7/8"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	2'- 9 7/8"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 3"	659.76 lb	<u>Supported Mt</u> 5578.28 lb	Passed - 12%	1.00	D + L
	5'- 5"	914.39 lb	<u>Supporting Mt</u> 10500.32 lb	Passed - 16%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

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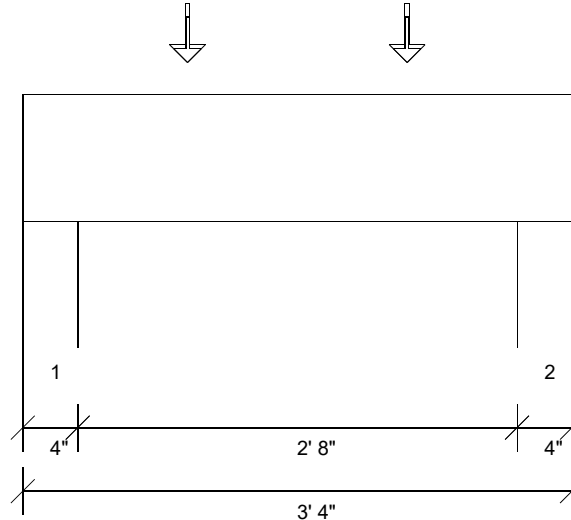
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	5'- 8"	Self Weight	6 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J2(i3771)	83.00 lb	166.00 lb	-	-
Point	1'- 4"	1'- 4"	J4(i3758)	50.00 lb	100.00 lb	-	-
Point	2'- 8"	2'- 8"	J2(i3742)	83.00 lb	166.00 lb	-	-
Point	2'- 8"	2'- 8"	J4(i3735)	50.00 lb	100.00 lb	-	-
Point	4'	4'	J2(i3732)	83.00 lb	166.00 lb	-	-
Point	4'	4'	J4(i3740)	50.00 lb	100.00 lb	-	-
Point	5'- 4"	5'- 4"	J2(i3779)	71.00 lb	143.00 lb	-	-
Point	5'- 4"	5'- 4"	J4(i3759)	43.00 lb	86.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E77(i147)	229.00 lb	425.00 lb	-	-
2	5'- 4"	5'- 8"	E76(i146)	318.00 lb	602.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 3'- 4"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 6"	Bottom:	2'- 8"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	1'- 8 3/16"	305.13 lb ft	3429.65 lb ft	Passed - 9%	1.00	D + L	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	1'- 1 1/4"	348.42 lb	2497.50 lb	Passed - 14%	1.00	D + L	
Live Load Deflection	1'- 8"	0'	N/A (L/360)	Passed - L/999	-	L	
Total Load Deflection	1'- 8"	0'	N/A (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0'- 3"	409.13 lb	<u>Supported Mt</u> 5578.13 lb	<u>Supporting Mt</u> 10500.02 lb	Passed - 7%	1.00	D + L
	3'- 1"	408.96 lb	5578.13 lb	10500.02 lb	Passed - 7%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

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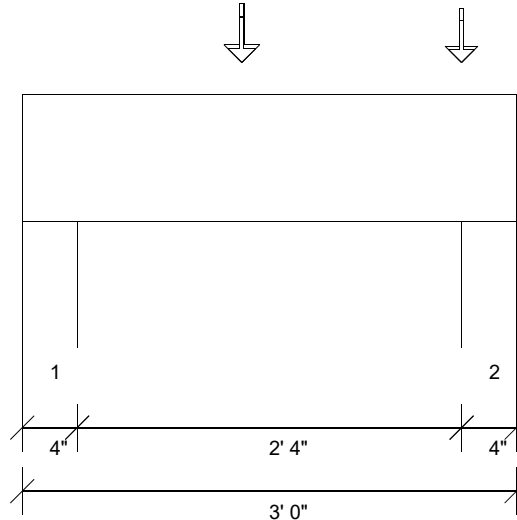
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	3'- 4"	Self Weight	6 lb/ft	-	-	-
Point	1'	1'	J2(i3712)	83.00 lb	166.00 lb	-	-
Point	1'	1'	J4(i3717)	50.00 lb	100.00 lb	-	-
Point	2'- 4"	2'- 4"	J2(i3750)	83.00 lb	166.00 lb	-	-
Point	2'- 4"	2'- 4"	J4(i3769)	50.00 lb	100.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E76(i146)	143.00 lb	266.00 lb	-	-
2	3'	3'- 4"	E78(i148)	143.00 lb	266.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 3'
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 3/8"	Bottom:	2'- 4"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	1'- 4"	261.81 lb ft	3429.65 lb ft	Passed - 8%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1 1/4"	240.04 lb	2497.50 lb	Passed - 10%	1.00	D + L
Live Load Deflection	1'- 5 9/16"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	1'- 5 9/16"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 3"	246.70 lb	<u>Supported Mt</u> 5578.13 lb	Passed - 4%	1.00	D + L
	2'- 9"	513.38 lb	<u>Supporting Mt</u> 10500.02 lb	Passed - 9%	1.00	D + L
			5578.12 lb	10499.99 lb		

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

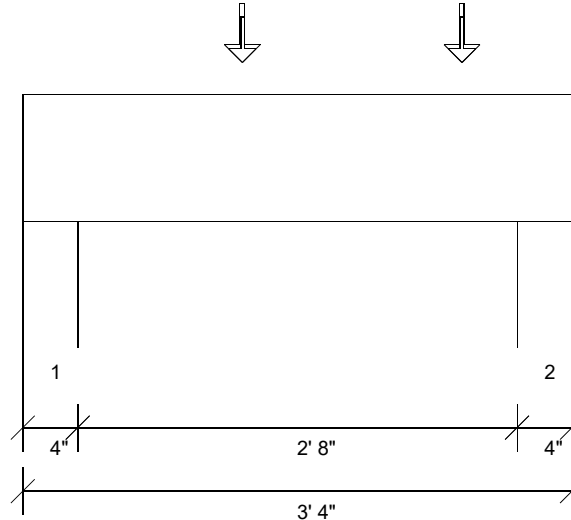
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	3'	Self Weight	6 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J2(i3780)	83.00 lb	166.00 lb	-	-
Point	1'- 4"	1'- 4"	J4(i3763)	50.00 lb	100.00 lb	-	-
Point	2'- 8"	2'- 8"	J2(i3786)	71.00 lb	143.00 lb	-	-
Point	2'- 8"	2'- 8"	J4(i3760)	43.00 lb	86.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E78(i148)	84.00 lb	151.00 lb	-	-
2	2'- 8"	3'	E80(i150)	181.00 lb	344.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 3'- 4"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'- 3 5/8"	Bottom:	2'- 8"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	1'- 4"	336.09 lb ft	3429.65 lb ft	Passed - 10%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 1 1/4"	308.67 lb	2497.50 lb	Passed - 12%	1.00	D + L
Live Load Deflection	1'- 7 7/8"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	1'- 7 7/8"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 3"	315.33 lb	<u>Supported Mt</u> 5578.12 lb	Passed - 6%	1.00	D + L
	3'- 1"	502.76 lb	<u>Supporting Mt</u> 10499.99 lb	Passed - 9%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

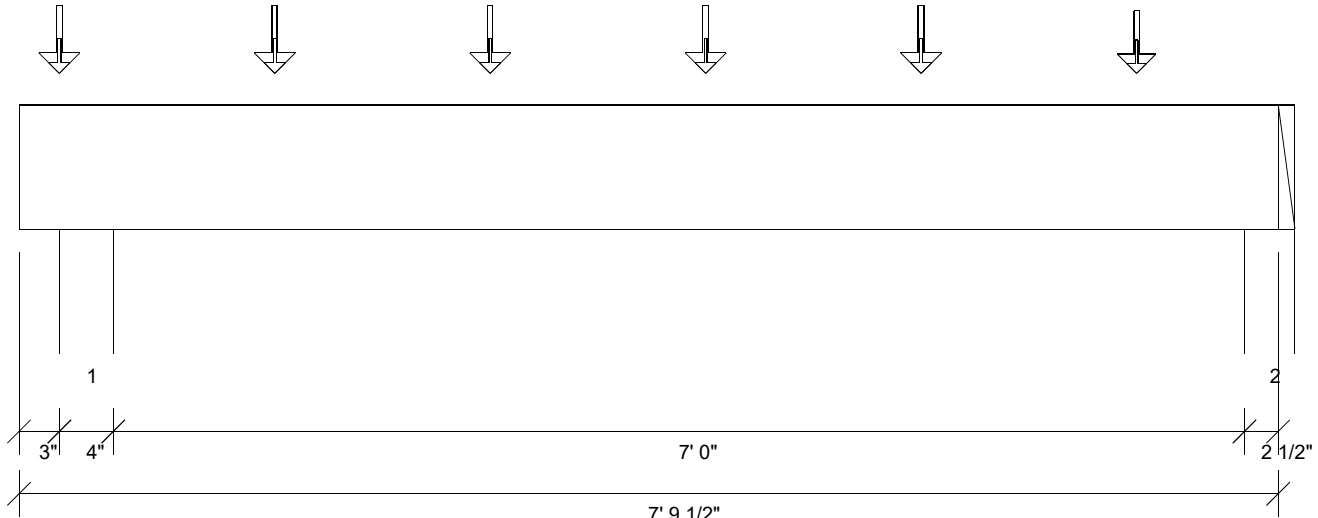
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	3'- 4"	Self Weight	6 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J2(i3719)	83.00 lb	166.00 lb	-	-
Point	1'- 4"	1'- 4"	J4(i3778)	50.00 lb	100.00 lb	-	-
Point	2'- 8"	2'- 8"	J2(i3772)	83.00 lb	166.00 lb	-	-
Point	2'- 8"	2'- 8"	J4(i3724)	50.00 lb	100.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 4"	E80(i150)	112.00 lb	203.00 lb	-	-
2	3'	3'- 4"	E82(i152)	174.00 lb	329.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 7'- 9 1/2"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 2 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination	
Critical Moment (Pos)	4'- 3"	2010.95 lb ft	3429.65 lb ft	Passed - 59%	1.00	D + L	
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft				
Critical Shear	1'- 4 1/4"	967.82 lb	2497.50 lb	Passed - 39%	1.00	D + L	
Live Load Deflection	4'- 11/16"	0'- 1/16"	N/A (L/360)	Passed - L/999	-	L	
Total Load Deflection	4'- 11/16"	0'- 1/16"	N/A (L/240)	Passed - L/999	-	D + L	
Max. Reaction	0'- 5"	1377.98 lb	Supported Mt: 5578.13 lb	Supported Mt: 10500.00 lb	Passed - 25%	1.00	D + L
	7'- 8"	1030.98 lb	3187.44 lb	6562.38 lb	Passed - 32%	1.00	D + L

Design Notes:

- * The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- * Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

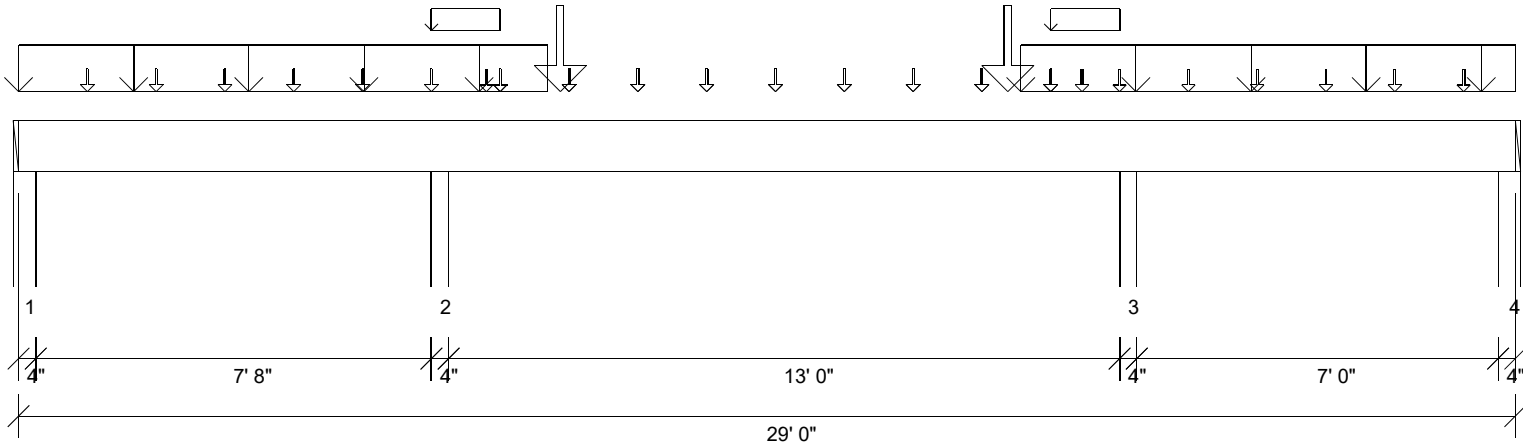
Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	7'- 9 1/2"	Self Weight	6 lb/ft	-	-	-
Point	0'- 3"	0'- 3"	J1(i3716)	107.00 lb	213.00 lb	-	-
Point	0'- 3"	0'- 3"	J4(i3784)	27.00 lb	55.00 lb	-	-
Point	1'- 7"	1'- 7"	J1(i3747)	107.00 lb	213.00 lb	-	-
Point	1'- 7"	1'- 7"	J4(i3777)	27.00 lb	55.00 lb	-	-
Point	2'- 11"	2'- 11"	J1(i3726)	107.00 lb	213.00 lb	-	-
Point	2'- 11"	2'- 11"	J4(i3783)	27.00 lb	55.00 lb	-	-
Point	4'- 3"	4'- 3"	J1(i3713)	107.00 lb	213.00 lb	-	-
Point	4'- 3"	4'- 3"	J4(i3715)	27.00 lb	55.00 lb	-	-
Point	5'- 7"	5'- 7"	J1(i3739)	107.00 lb	213.00 lb	-	-
Point	5'- 7"	5'- 7"	J4(i3749)	27.00 lb	55.00 lb	-	-
Point	6'- 11"	6'- 11"	J1(i3736)	93.00 lb	187.00 lb	-	-
Point	6'- 11"	6'- 11"	J4(i3738)	24.00 lb	48.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'- 3"	0'- 7"	E95(i168)	480.00 lb	912.00 lb	-	-
2	7'- 7"	7'- 9 1/2"	E97(i547)	354.00 lb	663.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



Graphical Illustration - Not To Scale
 Member Cut Length - 29'
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 0'	Bottom:	1'- 2 1/2"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	21'- 6"	12716.31 lb ft	39896.69 lb ft	Passed - 32%	1.25	D + Lr
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	20'- 4 1/8"	8186.51 lb	14806.64 lb	Passed - 55%	1.25	D + Lr
Live Load Deflection	14'- 9 9/16"	0'- 1/8"	N/A (L/360)	Passed - L/999	-	Lr
Total Load Deflection	14'- 9 3/4"	0'- 3/16"	N/A (L/240)	Passed - L/896	-	D + 0.75(L + Lr)
Max. Reaction			<u>Supported Mt</u> <u>Supporting Mt</u>			
	0'- 3"	978.78 lb	17226.63 lb 18375.08 lb	Passed - 6%	1.25	D + Lr
	0'- 3"	-660.28 lb	17226.63 lb -	Passed - 4%	1.25	D + Lr
	8'- 2"	11754.03 lb	17226.68 lb 18375.14 lb	Passed - 68%	1.25	D + Lr
	21'- 6"	11812.03 lb	17226.68 lb 18375.14 lb	Passed - 69%	1.25	D + Lr
	28'- 9"	756.11 lb	17226.59 lb 18375.04 lb	Passed - 4%	1.25	D + Lr
	28'- 9"	-959.77 lb	17226.59 lb -	Passed - 6%	1.25	D + Lr

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	29'	Self Weight	16 lb/ft	-	-	-
Uniform	0'	10'- 3"	User Load	150 lb/ft	-	200 lb/ft	-
Uniform	8'	9'- 4"	FC3 Floor Material	1 lb/ft	3 lb/ft	-	-
Uniform	19'- 5"	29'	User Load	150 lb/ft	-	200 lb/ft	-
Uniform	20'	21'- 4"	FC3 Floor Material	1 lb/ft	3 lb/ft	-	-
Point	1'- 4"	1'- 4"	J4(i3728)	54.00 lb	108.00 lb	-	-
Point	2'- 8"	2'- 8"	J4(i3758)	54.00 lb	108.00 lb	-	-
Point	4'	4'	J4(i3735)	54.00 lb	108.00 lb	-	-
Point	5'- 4"	5'- 4"	J4(i3740)	54.00 lb	108.00 lb	-	-
Point	6'- 8"	6'- 8"	J4(i3759)	54.00 lb	108.00 lb	-	-
Point	8'	8'	J4(i3721)	53.00 lb	106.00 lb	-	-
Point	9'- 3/4"	9'- 3/4"	J3(i3775)	9.00 lb	17.00 lb	-	-
Point	9'- 4"	9'- 4"	J4(i3717)	52.00 lb	105.00 lb	-	-
Point	9'- 4"	9'- 4"	J3(i3720)	45.00 lb	89.00 lb	-	-
Point	10'- 6"	10'- 6"	User Load	2392.00 lb	-	4783.00 lb	-
Point	10'- 8"	10'- 8"	J3(i3753)	72.00 lb	144.00 lb	-	-
Point	10'- 8"	10'- 8"	J4(i3769)	52.00 lb	105.00 lb	-	-
Point	12'	12'	J3(i3745)	72.00 lb	144.00 lb	-	-
Point	12'	12'	J4(i3722)	52.00 lb	104.00 lb	-	-
Point	13'- 4"	13'- 4"	J3(i3743)	72.00 lb	144.00 lb	-	-
Point	13'- 4"	13'- 4"	J4(i3763)	52.00 lb	105.00 lb	-	-
Point	14'- 8"	14'- 8"	J3(i3751)	72.00 lb	144.00 lb	-	-
Point	14'- 8"	14'- 8"	J4(i3760)	52.00 lb	104.00 lb	-	-
Point	16'	16'	J3(i3746)	72.00 lb	144.00 lb	-	-
Point	16'	16'	J4(i3752)	52.00 lb	104.00 lb	-	-
Point	17'- 4"	17'- 4"	J3(i3785)	72.00 lb	144.00 lb	-	-
Point	17'- 4"	17'- 4"	J4(i3755)	52.00 lb	104.00 lb	-	-
Point	18'- 8"	18'- 8"	J3(i3774)	72.00 lb	144.00 lb	-	-
Point	18'- 8"	18'- 8"	J4(i3778)	52.00 lb	105.00 lb	-	-

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.

- This report is based on modeled conditions input by the user. Actual field conditions may differ from those shown. These results should be reviewed by a qualified design professional.



Job: Lot 7 Raven Ridge
 Member Type: Beam | Level: 2nd Floor
 MiTek SAPPHERE™ Supply Version 8.2.2.241.Update5
 Designed by Single Member Design Engine

Label: BM1-3-i3555

Page: 17 of 18
 Date: 03/12/2019 14:58:07

Member: 3 - onCENTER LVL 2.0E 1 3/4" x 11 7/8"

Status: Design Passed

Point	19'- 2"	19'- 2"	User Load	2392.00 lb	-	4783.00 lb	-
Point	20'	20'	J3(i3725)	54.00 lb	107.00 lb	-	-
Point	20'	20'	J4(i3724)	52.00 lb	105.00 lb	-	-
Point	20'- 7 1/4"	20'- 7 1/4"	J3(i3767)	18.00 lb	35.00 lb	-	-
Point	21'- 4"	21'- 4"	J4(i3784)	30.00 lb	59.00 lb	-	-
Point	22'- 8"	22'- 8"	J4(i3777)	31.00 lb	61.00 lb	-	-
Point	24'	24'	J4(i3783)	31.00 lb	61.00 lb	-	-
Point	25'- 4"	25'- 4"	J4(i3715)	31.00 lb	61.00 lb	-	-
Point	26'- 8"	26'- 8"	J4(i3749)	31.00 lb	61.00 lb	-	-
Point	28'	28'	J4(i3738)	27.00 lb	54.00 lb	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			Snow
				Dead	Floor Live	Roof Live	
1	0'	0'- 4"	E64(i134)	233.00 lb	257.00/-242.00 lb	781.00/-787.00 lb	-
2	8'	8'- 4"	E69(i138)	4820.00 lb	1769.00 lb	6901.00 lb	-
3	21'- 4"	21'- 8"	E95(i168)	4719.00 lb	1602.00 lb	6968.00 lb	-
4	28'- 8"	29'	E91(i162)	63.00 lb	150.00/-276.00 lb	734.00/-900.00 lb	-

Errors, Warnings & Notes:

- * CAUTION: The maximum net analysis reaction exceeds the user-defined maximum uplift value at one or more supports.
- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



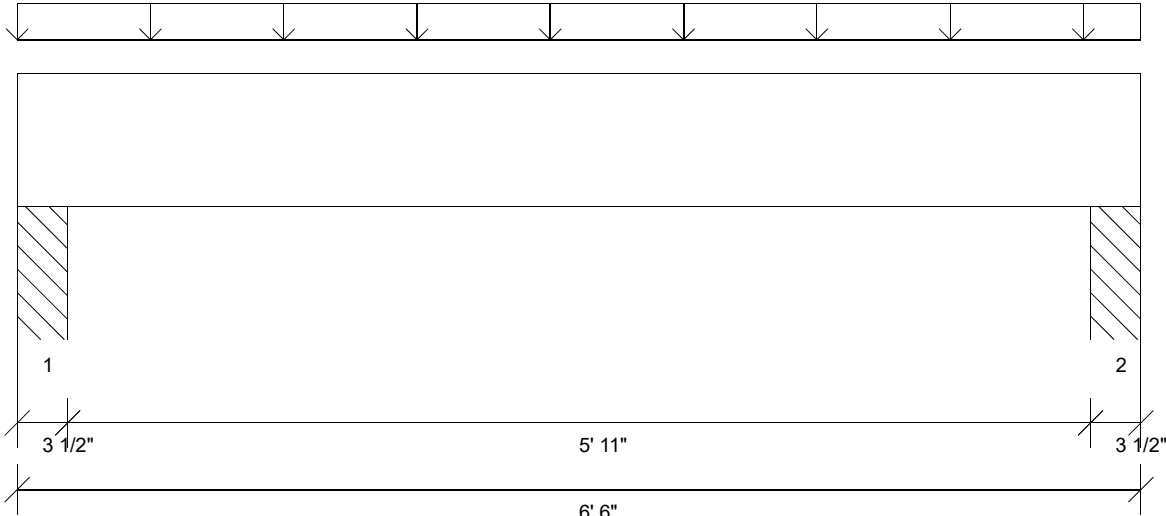
Job: Lot 7 Raven Ridge
 Member Type: Beam | Level: 2nd Floor
 MiTek SAPPHIRE™ Supply Version 8.2.2.241.Update5
 Designed by Single Member Design Engine

Label: 2-2x10's-i3843

Page: 18 of 18
 Date: 03/12/2019 14:58:07

Member: 2 - 2x10 SPF No.2

Status: Design Passed



Graphical Illustration - Not To Scale
 Member Cut Length - 6'- 6"
 MemberPitch - 0/12

Design Information:

Building Code:	IBC 2012	Floor Dead Load:	10.0 lb/ft ²	Roof Dead Load:	10.0 lb/ft ²	Ground Snow Load:	0.0 lb/ft ²
Design Methodology:	ASD	Floor Live Load:	40.0 lb/ft ²	Roof Live Load:	20.0 lb/ft ²		
		Unbraced Length	Top: 6'- 6"	Bottom:	6'- 6"		

Design Results:

	Location	Design	Control	Result	LDF	Load Combination
Critical Moment (Pos)	3'- 3"	672.33 lb ft	3429.65 lb ft	Passed - 20%	1.00	D + L
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)		0.00 lb ft	0.00 lb ft			
Critical Shear	1'- 3/4"	319.43 lb	2497.50 lb	Passed - 13%	1.00	D + L
Live Load Deflection	3'- 3"	0'	N/A (L/360)	Passed - L/999	-	L
Total Load Deflection	3'- 3"	0'	N/A (L/240)	Passed - L/999	-	D + L
Max. Reaction	0'- 2 1/2"	474.59 lb	Supported Mt/ 4940.63 lb	Passed - 10%	1.00	D + L
	6'- 3 1/2"	474.59 lb	Supporting Mt/ 7612.51 lb	Passed - 10%	1.00	D + L

Design Notes:

* Member design assumed proper ply to ply connection. Verify connection between plies according to code specification

Loading:

Type	Start	End	Source	Maximum Load Magnitudes			
				Dead	Floor Live	Roof Live	Snow
Self Weight	0'	6'- 6"	Self Weight	6 lb/ft	-	-	-
Uniform	0'	6'- 6"	User Load	70 lb/ft	70 lb/ft	-	-

Support Information:

Support	Start	End	Source	Maximum Analysis Reactions			
				Dead	Floor Live	Roof Live	Snow
1	0'	0'- 3 1/2"	PBO5(i3789)	247.00 lb	227.00 lb	-	-
2	6'- 2 1/2"	6'- 6"	PBO6(i3816)	247.00 lb	228.00 lb	-	-

Errors, Warnings & Notes:

- * The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- * Calculation of lateral stability factor (KL) is based on the width of one ply.
- * The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- * Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.